Contents to volume 258

Research Letters

Surface enhanced resonance Raman scattering (SERRS) as a probe of the structural differences between the Pr and Pfr forms of phytochrome (FEB 07817) *B.N. Rospendowski, D.L. Farrens, T.M. Cotton, P. -S. Song* 1

Identification and signal transduction mechanism of elastin peptide receptor in human leukocytes (FEB 07818) *Z. Varga, M.P. Jacob, L. Robert, T. Fülöp, jr* 5

Evidence from EPR spectroscopy that phosphorylation of Ser-40 in bovine adrenal tyrosine hydroxylase facilitates the reduction of high-spin Fe(III) under turnover conditions (FEB 07819) *K.K. Andersson, J. Haavik, A. Martinez, T. Flatmark, L. Petersson* 9

Evidence for the convergence of β-adrenergic and muscarinic signalling systems at a post-receptor site (FEB 07821) *V.J. Horn, B.J. Baum, I.S. Ambudkar* 13

Pharmacological characterization and region-specific expression in brain of the β2- and β3-subunits of the rat $GABA_A$ receptor (FEB 07820) *S.J. Lolait, A.-M. O'Carroll, K. Kusano, L.C. Mahan* 17

Animal and plant mitochondria contain specific thioredoxins (FEB 07823) *J.B. Bodenstein-Lang,, H. Follmann* 22

Low temperature photochemistry and spectral properties of a photosystem 2 reaction center complex containing the proteins D1 and D2 and two hemes of Cyt b-559 (FEB 07824) *V.A. Shuvalov, U. Heber, U. Schreiber* 27

Import and processing of proteins by castor bean leucoplasts (FEB 07825) *C. Halpin, J.E. Musgrove, J.M. Lord, C. Robinson* 32

Retinoic acid controls expression of epidermal transglutaminase at the pre-translational level (FEB 07826) *S. Michel, U. Reichert, J.L. Isnard, B. Shroot, R. Schmidt* 35

Interaction of the LexA repressor and the *uvrC* regulatory region (FEB 07829) *T. Stark, R.E. Moses* 39

Termination of the phytochelatin synthase reaction through sequestration of heavy metals by the reaction product (FEB 07827) *S. Loeffler, A. Hochberger, E. Grill, E.-L. Winnacker, M.H. Zenk* 42

Structure of spheroidene in the photosynthetic reaction center from Y *Rhodobacter sphaeroides* (FEB 07685) *B. Arnoux, A. Ducruix, F. Reiss-Husson, M. Lutz, J. Norris, M. Schiffer, C. -H. Chang*[x] 47

Kinetic analysis of nuclear factor I and its DNA-binding domain with the adenovirus origin of replication (FEB 07835) *P.H. Cleat, R.T. Hay* 51

Metabolism of peripheral lymphocytes, interleukin-2-activated lymphocytes and tumor-infiltrating lymphocytes from ^{31}P NMR studies (FEB 07822) *O. Kaplan, P. Aebersold, J.S. Cohen* 55

Rapid myosin phosphorylation transients in phasic contractions in chicken gizzard smooth muscle (FEB 07836) *W. Fischer, G. Pfitzer* 59

Monitoring protein crystallization by dynamic light scattering (FEB 07837) *V. Mikol, E. Hirsch, R. Giegé* 63

Glucose and nitrogen rapidly activate a Ca^2-inhibitable, serine/threonine kinase activity toward microtubule-associated protein 2 in *Saccharomyces cerevisiae* (FEB 07838) *M. Hoshi, E. Nishida, S. Matsumoto, T. Akiyama, M. Kawakami, I. Yahara and H. Sakai* 67

Direct sequencing of affinity-captured amplified human DNA application to the detection of apolipoprotein E polymorphism (FEB 07839) *A.-C. Syvänen, K. Aalto-Setälä, K. Kontula, H. Söderlund* 71

A consensus sequence for substrate hydrolysis by rhinovirus 3C proteinase (FEB 07840) *A.C. Long, D.C. Orr, J.M. Cameron, B.M. Dunn, J. Kay* 75

RNA editing at a splicing site of NADH dehydrogenase subunit IV gene transcript in wheat mitochondria (FEB 07841) *L. Lamattina, J.-H. Weil, J.-M. Grienenberger* 79

Inhibitors of arachidonic acid lipoxygenase impair the stimulation of inositol phospholipid hydrolysis by the T lymphocyte mitogen phytohaemagglutinin (FEB 07848) *A.R. Mire-Sluis, C.A. Cox, A.V. Hoffbrand, R.G. Wickremasinghe* 84

Molecular cloning and characterization of the complementary DNA coding for the B-chain of murine Clq (FEB 07850) *F. Petry, K.B.M. Reid, M. Loos* 89

Multiple $GABA_A$ receptor α subunit mRNAs revealed by developmental and regional expression in rat, chicken and human brain (FEB 07851) *P. Montpied, E.I. Ginns, B.M. Martin, D. Stetler, A.-M. O'Carroll, Stephen J. Lolait, L.C. Mahan, S.M. Paul* 94

Regulation of glutathione S-transferase subunits 3 and 4 in cultured rat hepatocytes (FEB 07852) *F. Morel, Y. Vandenberghe, S. Pemble, J.B. Taylor, D. Ratanasavanh, V. Rogiers, B. Ketterer, A. Guillouzo* 99

Brain-specific expression of transthyretin mRNA as revealed by cDNA cloning from brain (FEB 07854) *K. Motojima, S. Goto* 103

Phosphorylation of P1, a high mobility group-like protein, catalyzed by casein kinase II, protein kinase C, cyclic AMP-dependent protein kinase and calcium/calmodulin-dependent protein kinase II (FEB 07855) *S.I. Walaas, A.C. Østvold, S.G. Laland* 106

Papaya proteinase IV amino acid sequence (FEB 07856) *A. Ritonja, D.J. Buttle, N.D. Rawlings, V. Turk, A.J. Barrett* 109

Flavin adenine dinucleotide causes oligomerization of acetohydroxyacid synthase from Black Mexican Sweet corn cells (FEB 07828) *B.K. Singh, G.K. Schmitt* 113

A nuclear protein associated with actively transcribed nucleosomes exhibits Zn^{2+}-binding activity (FEB 07845) *C.C. Liew, H.Y. Chen* 116

Sequence and expression of a novel $GABA_A$ receptor α subunit (FEB 07842) *S. Ymer, A. Draguhn, M. Köhler, P.R. Schofield, P.H. Seeburg* 119

Expression of catalytically active rat *S*-adenosylmethionine decarboxylase in *Escherichia coli* (FEB 07843) *P. Salmikangas, M.-R. Keränen, A. Pajunen* 123

Sequence analysis of the cloned streptococcal cell surface antigen I/II (FEB 07844) *C. Kelly, P. Evans, L. Bergmeier, S.F. Lee, A. Progulske-Fox, A.C. Harris, A. Aitken, A.S. Bleisweis and T. Lehner* 127

Identification of a small intracellular region of the muscarinic m3 receptor as a determinant of selective coupling to PI turnover (FEB 07846) *J. Wess, M.R. Brann, T.I. Bonner* 133

Multiple charge isomers of human recombinant interleukin-1β (FEB 07857) *S. Kabir* 137

Effect of adenosine on fructose 2,6-bisphosphate levels and glucose metabolization by chicken erythrocytes (FEB 07859) *C. Espinet, R. Bartrons, J. Carreras* 143

Thin laminar microcrystals of 70 S ribosomes from *Thermus thermophilus* (FEB 07860) *V.A. Shirokov, S.N. Ryazantsev, Yu.V. Sergeev, M.B. Garber, V.D. Vasiliev* 147

Guanine nucleotides modify calcium entry induced by insulin-like growth factor-I (FEB 07858) *I. Kojima, M. Kitaoka, E. Ogata* 150

Published by Elsevier Science Publishers B.V. (Biomedical Division)
00145793/89/$3.50 © 1989 Federation of European Biochemical Societies

The refined crystal structure of the complex formed by bovine trypsin and *p*-guanidinobenzoate at 2.06 Å resolution (FEB 07861) *N. Tomioka, Y. Satow, A. Itai* 153
Suramin, an anti-cancer drug, inhibits protein kinase C and induces differentiation in neuroblastoma cell clone NB2A (FEB 07862) *C.E. Hensey, D. Boscoboinik, A. Azzi* 156
Expression of the *E. coli Lac Z* gene from a defective HSV-1 vector in various human normal, cancer-prone and tumor cells (FEB 07863) *D.A. Boothman, A.I. Geller, A.B. Pardee* 159
Poly(ADP-ribose) polymerase activity is inhibited by 2',5'-oligoadenylates in mouse L-cells (FEB 07830) *D.T. Buonamassa, M. Malanga, E.M. Coccia, G. Romeo, E. Affabris, B. Farina, H. Suzuki* 163
The algorithm of estimation of the K_m values for primers of various structure and length in the polymerization reaction catalyzed by Klenow fragment of DNA polymerase I from *E.coli* (FEB 07831) *G.A. Nevinsky, A.V. Nemudraya, A.S. Levina, V.V. Khomov* 166
λ*plac*10 Transducing bacteriophage: DNA primary structure of the region of the abnormal excision (FEB 07833) *G.V. Shpakovski, M.P. Karakashly, Yu.A. Berlin* 171
Crystallization and preliminary X-ray crystallographic study of the quinoprotein methanol dehydrogenase from bacterium W3A1 (FEB 07834) *Z.-X. Xia, Z.-P. Hao, F.S. Mathews, V.L. Davidson* 175
Inhibition of the first phosphodiester bond formation catalyzed by *Escherichia coli* RNA polymerase in the presence of bovine seminal plasmin: promoter dependency (FEB 07832) *V. Gopal, D. Chatterji* 177

Corrigenda 180

Notes to Authors 181

Febs News 183

Research Letters

Stabilisation and immobilisation of penicillin amidase (FEB 07853) *N. Burteau, S. Burton, R.R. Crichton* 185
Cation channels by subunit III of the channel portion of the chloroplast H^+-ATPase (FEB 07864) *G. Schönknecht, G. Althoff, E. Apley, R. Wagner, W. Junge* 190
Expression of mRNAs for collagens and other matrix components in dedifferentiating and redifferentiating human chondrocytes in culture (FEB 07880) *K. Elima, E. Vuorio* 195
Cloning of gene cluster for sarcotoxin I, antibacterial proteins of *Sarcophaga peregrina* (FEB 07885) *A. Kanai, S. Natori* 199
Amplification of the phosphorylation site-ATP-binding site cDNA fragment of the Na^+,K^+-ATPase and the Ca^{2+}-ATPase of *Drosophila melanogaster* by polymerase chain reaction (FEB 07881) *A. Váradi, M. Gilmore-Heber, E.J. Benz, jr* 203
Stimulation of F_A and phosphatase-1 activities by insulin in 3T3-L1 cells (FEB 07882) *E. Villa-Moruzzi* 208
A cysteine proteinase cDNA from *Trypanosoma brucei* predicts an enzyme with an unusual C-terminal extension (FEB 07883) *J.C. Mottram, M.J. North, J.D. Barry, G.H. Coombs* 211
A G-protein mediates secretagogue-induced gap junctional channel closure in pancreatic acinar cells (FEB 07884) *R. Somogyi, H.-A. Kolb* 216
The F_1-ATPase of *Vibrio alginolyticus*: Purification and N-terminal sequence of major subunits (FEB 07887) *O.Yu. Dmitriev, V.A. Grinkevich, V.P. Skulachev* 219
Synapsin I from human brain: Phosphorylation by Ca^{2+}, phospholipid-dependent protein kinase (FEB 07889) *S.E. Severin jr, E.L. Moskvitina, E.V. Bykova, S.V. Lutzenko, V.I. Shvets* 223
A special repressor/activator system controls distribution of mRNA between translationally active and inactive mRNPs in rabbit reticulocytes (FEB 07888) *W.B. Minich, N.L. Korneyeva, Yu.V. Berezin, L.P. Ovchinnikov* 227
Monoclonal antibody to galactosylceramide: discrimination of structural difference in the ceramide moiety (FEB 07867) *H. Nakakuma, M. Arai, T. Kawaguchi, K. Horikawa, M. Hidaka, K. Sakamoto, M. Iwamori, Y. Nagai, K. Takatsuki* 230
Biosynthesis of small proteoglycans by hepatic lipocytes in primary culture (FEB 07868) *P. Witsch, H. Kresse, A.M. Gressner* 233
Purification to homogeneity and characterization of major fatty acid ethyl ester synthase from human myocardium (FEB 07870) *P.S. Bora, C.A. Spilburg, L.G. Lange* 236
Immunological detection of arrestin, a phototransduction regulatory protein, in the cytosol of nucleated erythrocytes (FEB 07869) *M. Mirshahi, F. Borgese, A. Razaghi, U. Scheuring, F. Garcia-Romeu, J.-P. Faure, R. Motais* 240
New reagent for discrimination of single- and double-stranded regions in DNA (FEB 07873) *A.V. Mazin, A.V.Kuzminov, G.L. Dianov, R.I. Salganik* 244
Site-directed mutagenesis of histidine 62 in the 'basic patch' region of yeast phosphoglycerate kinase (FEB 07871) *W.J. Fairbrother, L. Hall, J.A. Littlechild, P.A. Walker, H.C. Watson, R.J.P. Williams* 247
New crystal forms of the small subunit of ribonucleotide reductase from *Escherichia coli* (FEB 07872) *P. Nordlund, U. Uhlin, C. Westergren, T. Joelsen, B.-M. Sjöberg, H. Eklund* 251
HSV infection induces increased transcription of Alu repeated sequences by RNA polymerase III (FEB 07874) *K.L. Jang, D.S. Latchman* 255
Consensus peptide antibodies reveal a widespread occurrence of Ca^{2+}/lipid-binding proteins of the annexin family (FEB 07877) *V. Gerke* 259
Sheep neuropeptide Y: A third structural type of a highly conserved peptide (FEB 07876) *R. Sillard, B. Agerberth, V. Mutt, H. Jörnvall* 263
Modification of the electron-transfer sites of *Pseudomonas aeruginosa* azurin by site-directed mutagenesis (FEB 07878) *T. Pascher, J. Bergström, B.G. Malmström, T. Vänngård, L.G. Lundberg* 266
Interleukin 1 and tumour necrosis factor increase phosphorylation of the small heat shock protein: Effects in fibroblasts, Hep G2 and U937 cells (FEB 07879) *P. Kaur, W.J. Welch, J. Saklatvala* 269
Irradiation of the template with high-intensity (pulse-laser) ultraviolet light results in DNA-polymerase termination events at deoxyguanosine residues (FEB 07894) *I.G. Panyutin, O.I. Kovalsky, E.I. Budowsky* 274
The intracellular localization of glycolate oxidoreductase in *Escherichia coli* (FEB 07891) *A.-K.J. Sallal, N.A. Nimer* 277
Insulin induces a similar reduction in the concentrations of its own receptor and of an insulin-sensitive glycosyl-phosphatidylinositol in isolated rat hepatocytes (FEB 07892) *J.M. Ruiz-Albusac, J.A. Zueco, E. Velázquez, J.F. Alvarez, J.M. Mato, E. Blázquez* 281
Role of supernumerary subunits in mitochondrial cytochrome *c* oxidase (FEB 07893) *Y. Planques, N. Capitanio, G. Capitanio, E. De Nitto, G. Villani, S. Papa* 285
Electrophysiological expression of endothelin and angiotensin receptors in *Xenopus* oocytes injected with rat heart mRNA (FEB 07896) *P. Lory, S. Richard, F.A. Rassendren, F. Tiaho, J. Nargeot* 289
Additive effects of dexamethasone and calcium on the calcitonin mRNA level in adrenalectomized rats (FEB 07898) *P. Besnard, V. Jousset, J.-M. Garel* 293
An ice nucleation active gene of *Erwinia ananas*: Sequence similarity to those of *Pseudomonas* species and regions required for ice nucleation activity (FEB 07899) *K. Abe, S. Watabe, Y. Emori, M. Watanabe, S. Arai* 297

A putative protein of a growth specific cDNA from BALB/c-3T3 cells is highly similar to the extracellular portion of mouse interleukin 1 receptor (FEB 07900) *S. Tominaga* 301

Characterization and N-terminal sequence of a 5 kDa polypeptide in the photosystem I core complex from spinach (FEB 07901) *S. Hoshina, S. Sue, N. Kunishima, K. Kamide, K. Wada, S. Itoh* 305

Investigations on nucleotide binding sites of isolated chloroplast ATPase by modification with 7-chloro-4-nitrobenzofurazan (FEB 07902) *S. Bickel-Sandkötter, P. Strümper* 309

Isolation and characterization of the gene encoding phosphoenolpyruvate carboxykinase from *Saccharomyces cerevisiae* (FEB 07903) *M.D. Valdés-Hevia, R. de la Guerra, C. Gancedo* 313

Prostaglandin endoperoxide synthase contains an EGF-like domain (FEB 07897) *H. Toh* 317

Purification of Shiga toxin by α-D-galactose-(1→4)-β-D-galactose-(1→4)-β-D-glucose-(1→) receptor ligand-based chromatography (FEB 07909) *M. Ryd, H. Alfredsson, L. Blomberg, Å. Andersson, A.A. Lindberg* 320

Constitutive in vitro binding of nuclear proteins to the 5′-flanking region of 6-16, a human gene inducible by α, β-interferons (FEB 07904) *Yu. Chernajovsky* 323

$CaCl_2$ inhibition of H_2O_2 electron donation to photosystem II in submembrane preparations depleted in extrinsic polypeptides (FEB 07905) *A. Rashid, R. Carpentier* 331

Expression in *Escherichia coli* of catalytically active phenylalanine ammonia-lyase from parsley (FEB 07906) *W. Schulz, H.-G. Eiben, K. Hahlbrock* 335

Correlation between dissipative fluorescence quenching at photosystem II and 50 μs recombination luminescence (FEB 07907) *U. Schreiber, C. Neubauer* 339

The neuroleptic activity of haloperidol increases after its solubilization in surfactant micelles: Micelles as microcontainers for drug targeting (FEB 07908) *A.V. Kabanov, V.P. Chekhonin, V.Yu. Alakhov, E.V. Batrakova, A.S. Lebedev, N.S. Melik-Nubarov, S.A. Arzhakov, A.V. Levashov, G.V. Morozov, E.S. Severin, V.A. Kabanov* 343

Identification of four lipocortin proteins and phosphorylation of lipocortin I by protein kinase C in cytosols of porcine thyroid cell cultures (FEB 07910) *F. Antonicelli, B. Omri, M.F. Breton, B. Rothhut, F. Russo-Marie, M. Pavlovic-Hournac, B. Haye* 346

Augmented production of platelet-activating factor in human polymorphonuclear leukocytes by ketone bodies (FEB 07911) *T. Sugiura, A. Ojima-Uchiyama, Y. Masuzawa, K. Waku* 351

Book Reviews (FEB 07875) 355

Author Index 361

Table of Contents 366

Notes to Authors 369

Febs News 371